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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/827,760	04/06/2001	Harold L. Simonsen	528-009766-US(PAR)	6115

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EXAMINER

RYMAN, DANIEL J

ART UNIT	PAPER NUMBER
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2616

DATE MAILED: 07/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/827,760

Applicant(s)

SIMONSEN ET AL.

Examiner

Daniel J. Ryman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 8, 9, 11-17 and 19-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 17, 19, 20, 22 and 23 is/are allowed.
- 6) ☒ Claim(s) 1-5, 8, 9, 11-16 and 21 is/are rejected.
- 7) ☐ Claim(s) 1, 5, 11 and 21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see Response, filed 5/26/2006, referring to Response, filed 11/22/2005, with respect to the rejection(s) of claim(s) 1-5, 8, 9, 11-17, and 19-23 under Richardson et al. (USPN 5,369,637) and Marshall (USPN 5,502,744) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made regarding claims 1-5, 8, 9, 11-16, and 21.

Claim Objections

2. Claim 1 is objected to because of the following informalities: in line 3, "node adapted to receive" should be "node receiving" since "adapted to" makes optional, but does not require, the subsequent limitation, and, in line 16-17, "and to dynamically tailor" should be "and dynamically tailoring". Appropriate correction is required.

3. Claim 5 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 5 requires that the "communications link compris[e] a time division multiple access link using a multi-phase shift key waveform." Claim 1, which claim 5 depends upon, requires that the "communications link compris[e] a time division multiple access link using bi-BPSK modulation". Here, "bi-BPSK modulation" is a narrower limitation than "multi-phase shift key waveform" since bi-BPSK is a type of multi-phase shift key waveform. See Specification: p. 7, lines 15-18. Since claim 5 recites a broader limitation than the limitation recited in claim 1, claim 5 fails to further limit claim 1.

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4. Claim 11 is objected to because of the following informalities: in lines 1-2, “the other channel” should be “the second channel” since “the other channel” lacks antecedent basis.

Appropriate correction is required.

5. Claim 21 is objected to because of the following informalities: in lines 1-2, “further comprising the high signal to noise ratio channel used to maintain TDMA slots timing, link synchronization and slot management” should be “wherein the first channel further comprises slot management” since claim 1, which claim 21 depends upon, recites that the “high signal to noise ratio channel” is “the first channel” and since claim 1 recites that the first channel is used to maintain slot timing and link synchronization. In line 5, “the data transport channel” should be “the second channel” since “the data transport channel” lacks antecedent basis. Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 1-5, 8, 9, 11, and 21 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

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8. Claim 1 recites: “the central node providing slot timing and link synchronization via said first channel” where the first channel is a channel “operating at a lower data rate to achieve a high signal-to-noise ratio.” The Specification recites:

Via [the protected data channel 56], the remote node 30 can send the central node 20 information pertaining to TDMA link management and maintenance, and any critical, fixed rate, user data. In addition, the protected data channel 56 is adapted to provide the central node 20 with timing necessary to acquire and extract the transmission data for both the protected data 56 and wideband data channels.

Specification: p. 12, line 27-p. 13, line 2. “The protected data channel 56 . . . is generally defined to be the low rate channel that offers a high signal-to-noise ratio.” Specification: p. 12, lines 24-26. In addition, the Specification recites: “The broadcast link 40 is generally a continuous transmission from the central node 20 to each of the remote nodes 30 and can be used to transmit data and information from the central node 20 to each remote node 30.” Specification: p. 5, lines 20-24; see also, Specification: p. 4, lines 6-11. “Generally, the broadcast link 40 includes a channel that is adapted to transfer unique link maintenance information from the central node 20 to the remote nodes 30. The link information generally comprises data used to maintain and manage both the broadcast link 40 and the communications link 50.” Specification: p. 5, line 31-p. 6, line 4. Thus, it is the *remote* node that provides slot timing and link synchronization via the *first channel*, not the *central* node. Rather, the central node communicates with each remote node using the *broadcast* channel. Since the above limitation was added by amendment in the RCE filed 1/13/2006, claim 1 contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 2, 8, 9, and 11-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

11. Claim 2 recites the limitation "the one channel" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim. While claim 1, which claim 2 depends upon, recites "a first channel" and "a second channel," both of these channels are directed to the communications link. The "one channel" in claim 2 is clearly directed to the broadcast link. Thus, "the one channel" lacks antecedent basis. Examiner notes that if claim 2 is amended to delete "the one channel" requirement, such that claim 2 reads "wherein the broadcast link transfers link maintenance information from the central node to each of the remote nodes," then claim 2 will be substantially duplicative of claim 4. Therefore, Applicant should not simply delete "the one channel" from claim 2 since this will make claim 2 subject to an objection.

12. Claim 8 recites the limitation "the one channel" in lines 1-2 and the limitation "the other channel" in line 5. There is insufficient antecedent basis for these limitations in the claim. Claim 1, which claim 8 depends upon, recites "a first channel" and "a second channel." It appears that "the one channel" is directed to "the first channel" of claim 1 since claim 1 recites that the first channel provides "slot timing and link synchronization." However, it is unclear if "the other channel" refers to "the second channel" or another channel in the system. Therefore, Applicant should change "the one channel" to "the first channel" in addition to providing antecedent basis for "the second channel." Further, in the same vein as the objection to claim 21 above, Examiner suggests amending claim 8 from "wherein the one channel provides slot timing, communications

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link synchronization and slot management functions” to “wherein the first channel further provides slot management functions” since claim 1 already recites that the first channel provides “slot timing and link synchronization.”

13. Claim 9 recites the limitation “the one channel” in lines 1-2 and the limitation “the other channel” in line 3. There is insufficient antecedent basis for these limitations in the claim. While claim 1, which claim 9 depends upon, recites “a first channel” and “a second channel,” it is unclear whether “the one channel” and “the other channel” refer to either “the first channel” or the “second channel” or some other channel in the system. Therefore, Applicant should amend claim 9 to provide antecedent basis for “the one channel” and “the other channel.”

14. Claim 12 recites, in line 6, “the link”; however, there are two antecedent bases for “the link” in claim 12, namely “a broadcast link” and “a time division multiple access link.” In addition, claim 12 recites: “the link including a first channel operating at a lower data rate to achieve a high signal-to-noise ratio to provide all link maintenance and management functions including slot timing for the broadcast link and time division multiple access link.” As outlined above, the Specification recites that the *broadcast* link is used to transfer link maintenance and management information for the broadcast link and time division multiple access link.

Specification: p. 5, line 31-p. 6, line 4. But claim 12 also recites: “the link including . . . a second channel that operates at high data rates and lower signal-to-noise ratio than the first channel.” As outlined above, the Specification recites that the *time division multiple access* link includes a channel that operates at high data rates and lower signal-to-noise ratio than another channel.

Specification: p. 12, line 24-p. 13, line 2. Therefore, Examiner cannot determine to which link “the link” refers since it could refer to either the broadcast link, due to the “first channel”

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limitation, or the time division multiple access link, due to the “second channel” limitation. Applicant should amend claim 12 to clearly distinguish to which link “the link” in claim 12 is directed by changing “the link” to either “the broadcast link” or “the time division multiple access link” *and* amending claim 12 to clearly distinguish to which link “the first channel” and the “second channel” belong.

Allowable Subject Matter

15. Claims 17, 19, 20, 22, and 23 are allowed. The prior art does not disclose or fairly suggest using a high signal-to-noise ratio channel in a link to provide a remote node transmit power control with slot timing and link synchronization, such that the remote node is provided bandwidth on demand in a second, high-speed channel located on the same link.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Ryman whose telephone number is (571)272-3152. The examiner can normally be reached on Mon.-Fri. 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Huy Vu can be reached on (571)272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Daniel J Ryman
Examiner
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A handwritten signature in black ink, appearing to read "Daniel Ryman", is positioned below the printed name and title.